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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,285	09/24/2003	Satoru Oishi	1232-5165	6579
27123	7590	02/07/2005	EXAMINER	
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			LAU, TUNG S	
			ART UNIT	PAPER NUMBER
			2863	

DATE MAILED: 02/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/669,285

Applicant(s)

OISHI ET AL.

Examiner

Tung S Lau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 7-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 4, 7-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Hiroi et al. (U.S. Patent Application Publication 2003/0007677).

Regarding claim 1:

Hiroi discloses a position detecting method comprising the steps of: forming an image a mark on a sensor (fig. 3, unit 33, page 9, section 0091-0094); forming an image of mark on a sensor (fig. 3, unit 33); performing first process that processes by the sensor with respect to each of plurality of values of a parameter of the first process (fig. 3, unit 35, page 3-4, section 0033-0034); performing a second process that obtains a feature value obtained by the first process, determining a value of the a parameter based on the features value obtained by the second process and a reference value (page 3-4, section 0033-0034); and performing a third process that obtains a position of the mark based on an image

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signal obtained by the first process using the determined parameter (page 3-4, section 0033-0034, fig. 12, unit 59, fig. 15, unit 505).

Regarding claim 10:

Hiroi discloses a position detecting apparatus comprising: a detecting system to detect an image of a mark (fig. 3, unit 33, page 9, section 0091-0094); and a processing system to perform a first process that processes an image signal obtained by said detecting system with respect to each of a plurality of values of a parameter of the first process (page 3-4, section 0032-0035) to perform a second process that obtain a feature value of each signal obtained by the first process (page 3-4, section 0032-0035), to determine a value of the parameter based on the feature values obtained by the second process and a reference value (page 3-4, section 0032-0035), and to perform a third process that obtained a position of the mark based on an image signal obtained by the first process using the determined value (page 3-4, section 0032-0035).

Regarding claim 2, Hiroi also discloses filtering including zero phase filter of the order of the filter (page 9, section 0091). Regarding claim 4, Hiroi also discloses Feature value corresponds to an interval between elements of the mark (page 3-4, section 0033-0034); Regarding claim 7, Hiroi also discloses deviation of the feature from the reference value (page 3-4, section 0033-0034); Regarding claim 8, Hiroi also discloses deviation of a plurality of features (page 3-4, section 0033-0034); Regarding claim 9, Hiroi also discloses removing noise (page 8, section 83, page 9, section 91);); Regarding claim 11, Hiroi also discloses detect a

position mark formed on the object (fig. 3);); Regarding claim 12, Hiroi also discloses developing the pattern has been transferred (fig. 3, 10, fig. 11, unit 22, 59, fig. 13).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

a. Claims 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroi et al. (U.S. Patent Application Publication 2003/0007677) in view of Okumura et al. (U.S. Patent Application Publication 2002/0113218).

Hiroi discloses a method including the subject matter discussed above except the process is a polynomial approximation. Okumura discloses process is a polynomial approximation (page 8, section 0081, page 11, section 104-106), in order to reduce and eliminate position detection error during wafer manufacturing process (page 3, section 0021-0023, page 1, section 0004).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hiroi to have the process is a polynomial approximation, taught by Okumura, in order to reduce and eliminate position detection error during wafer manufacturing process (page 3, section 0021-0023, page 1, section 0004).

Response to Arguments

3. Applicant's arguments filed 1/18/2005 have been fully considered but they are not persuasive.

A. Applicant argues in the arguments that the prior art does not show the 'determining a value of the parameter based on the feature values obtained by the second process and a reference value'. Hiroi discloses 'determining a value of the parameter based on the feature values obtained by the second process and a reference value' in page 3-4, section 0033-0034.

Conclusion


THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung S Lau whose telephone number is 571-272-2274. The examiner can normally be reached on M-F 9-5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 571-272-2269. The fax phone numbers for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TL


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